CONTENTS OF VOLUME XX

NUMBER 1

PAGE

THE PERMO-CARBONIFEROUS OF NORTHERN NEW MEXICO. S. W. Williston and E. C. Case 1

ON THE DISTRIBUTION OF LOWER TRIASSIC FAUNAS. James Perrin Smith 13

PANTYLUS CORDATUS COPE. Maurice G. Mehl 21

NOTES ON TERTIARY DEPOSITS NEAR COALINGA OIL FIELD AND THEIR STRATIGRAPHIC RELATIONS WITH THE UPPER CRETACEOUS. E. T. Dumble 28

KAURI GUM MINING IN NEW ZEALAND. R. A. F. Penrose, Jr. . . . 38

PRELIMINARY NOTES ON SOME IGNEOUS ROCKS OF JAPAN. V. S. Kôzu 45

GRAVEL AS A RESISTANT ROCK. Sidney Paige 49

SOME OBSERVATIONS AND EXPERIMENTS ON JOINT PLANES. I. Pearl Sheldon 53

PETROLOGICAL ABSTRACTS AND REVIEWS 80

REVIEWS 91

NUMBER 11

AN EXPERIMENTAL CONTRIBUTION TO THE QUESTION OF THE DEPTH OF THE ZONE OF FLOW IN THE EARTH'S CRUST. Frank D. Adams 97

ON THE LIMITING STRENGTH OF ROCKS UNDER CONDITIONS OF STRESS EXISTING IN THE EARTH'S INTERIOR. Louis Vessot King . . 119

AN OLD EROSION SURFACE IN IDAHO: ITS AGE AND VALUE AS A DATUM PLANE. Joseph B. Umpleby 139

EUGEN HUSSAK. Miguel A. Lisboa 148

THE PETROGRAPHIC CHARACTER OF OHIO SANDS WITH RELATION TO THEIR ORIGIN. D. Dale Condit 152

SOME OBSERVATIONS AND EXPERIMENTS ON JOINT PLANES. II. Pearl Sheldon 164

REVIEWS 184

NUMBER III

PAGE

AUSTRALIAN GLACIATIONS. Walter Howchin 193

THE VALUE OF CERTAIN CRITERIA FOR THE DETERMINATION OF THE ORIGIN OF FOLIATED CRYSTALLINE ROCKS. I. J. D. Trueman . 228

SILICEOUS OÖLITES AND OTHER CONCRETIONARY STRUCTURES IN THE VICINITY OF STATE COLLEGE, PENNSYLVANIA. Elwood S. Moore 259

PETROLOGICAL ABSTRACTS AND REVIEWS 270

REVIEWS 281

NUMBER IV

DYNAMIC RELATIONS AND TERMINOLOGY OF STRATIGRAPHIC CONFORMITY AND UNCONFORMITY. W. O. Crosby 289

THE VALUE OF CERTAIN CRITERIA FOR THE DETERMINATION OF THE ORIGIN OF FOLIATED CRYSTALLINE ROCKS. II. J. D. Trueman 300

AN OCCURRENCE OF COAL WHICH BEARS EVIDENCE OF UNUSUAL CONDITIONS ACCOMPANYING ITS DEPOSITION. Jesse E. Hyde . . 316

THE GEOLOGY OF SOUTH MOUNTAIN AT THE JUNCTION OF BERKS, LEBANON, AND LANCASTER COUNTIES, PENNSYLVANIA. H. N. Eaton 331

MURAENOSAURUS? REEDII, SP. NOV., AND TRICLEIDUS? LARAMIENSIS KNIGHT, AMERICAN JURASSIC PLESIOSAURS. Maurice G. Mehl . 344

METAMORPHIC STUDIES. C. K. Leith and W. J. Mead 353

PETROLOGICAL ABSTRACTS AND REVIEWS 362

REVIEWS 373

RECENT PUBLICATIONS 380

NUMBER V

THE EVIDENCE OF THREE DISTINCT GLACIAL EPOCHS IN THE PLEISTOCENE HISTORY OF THE SAN JUAN MOUNTAINS, COLORADO. Wallace W. Atwood and Kirtley F. Mather 385

THE OLD EROSION SURFACE IN IDAHO: A CRITICISM. Eliot Blackwelder 410

GLACIATION OF THE ALASKA RANGE. Stephen R. Capps . . . 415

SOME SMALL NATURAL BRIDGES IN EASTERN WYOMING. V. H. Barnett 438

PAGE

ROCK-CUT SURFACES IN THE DESERT RANGES. Sidney Paige . . 442

SPECULATIONS REGARDING THE GENESIS OF THE DIAMOND. II. Orville A. Derby 451

THE ORDER OF CRYSTALLIZATION IN IGNEOUS ROCKS. N. L. Bowen 457

PETROLOGICAL ABSTRACTS AND REVIEWS 469

NUMBER VI

MICROSCOPICAL PETROGRAPHY FROM THE QUANTITATIVE VIEWPOINT Fred. Eugene Wright. 481

GLACIATION IN THE TELLURIDE QUADRANGLE, COLORADO. Allen David Hole 502

ON THE STRATIGRAPHIC POSITION AND AGE OF THE JUDITH RIVER FORMATION. I. A. C. Peale 530

MODIFICATIONS OF THE QUANTITATIVE SYSTEM OF CLASSIFICATION OF IGNEOUS ROCKS. Whitman Cross, J. P. Iddings, L. V. Pirsson, H. S. Washington 550

ISOSTASY, A REJOINDER TO THE ARTICLE BY HARMON LEWIS. John F. Hayford 562

REVIEWS 579

NUMBER VII

THE DISCONFORMITY BETWEEN THE BEDFORD AND BEREA FORMATIONS IN CENTRAL OHIO. Charles S. Prosser 585

GLACIATION IN THE TELLURIDE QUADRANGLE, COLORADO. II. Allen David Hole 605

ON THE STRATIGRAPHIC POSITION AND AGE OF THE JUDITH RIVER FORMATION. II. A. C. Peale 640

SOME TRIASSIC FOSSILS FROM SOUTHEASTERN ALASKA. Wallace W. Atwood 653

PRELIMINARY NOTES ON SOME IGNEOUS ROCKS OF JAPAN. VI. S. Kôzu 656

THE EFFECT OF IGNEOUS INTRUSIONS ON THE ACCUMULATION OF OIL IN NORTHEASTERN MEXICO. V. R. Garfias 666

EDITORIAL 673

REVIEWS 675

A CORRECTION 680

NUMBER VIII

PAGE

THE BANNOCK OVERTHRUST: A MAJOR FAULT IN SOUTHEASTERN IDAHO AND NORTHEASTERN UTAH. R. W. Richards and G. R. Mansfield 681

GLACIATION IN THE TELLURIDE QUADRANGLE, COLORADO. III. Allen David Hole 710

ON THE STRATIGRAPHIC POSITION AND AGE OF THE JUDITH RIVER FORMATION. III. A. C. Peale 738

USE OF SYMBOLS IN EXPRESSING THE QUANTITATIVE CLASSIFICATION OF IGNEOUS ROCKS. Whitman Cross 758

THE PHYSICAL SETTING OF THE CHILEAN BORATE DEPOSITS. Rollin T. Chamberlin 763

WATER-WORN PEBBLES IN CARBONIFEROUS SANDSTONE. William F. Prouty 769

REVIEWS 772

INDEX TO VOLUME XX 777